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1981

Shipments of HOT DIP AFTER FABRICATION GALVANIZED STEEL by End-Use Industries

SHIPMENTS OF HOT DIP AFTER FABRICATION GALVANIZED STEEL BY END-USE INDUSTRIES FOR 1981 (Short Tons)

END-USE INDUSTRIES		SHIPMENTS (TONS)	CATEGORY TOTALS (TONS)
AGRICULTURE	Farm, Garden, Irrigation, Machinery & Equipment	98,561	98,561
ELECTRIC UTILITIES	Electric Transmission, Distribution & Generating	268,205	
	Noncurrent Carrying Wire Devices	54,201	
	Misc.-Rebar, Expanded Lath	2,296	324,702
FABRICATED WIRE PRODUCTS		233,788	233,788
HEAVY CONSTRUCTION (Excluding Highway)	Petrochemical (including refineries)	89,541	
	Pulp & Paper Mills	2,679	
	Water & Waste Treatment	10,311	
	Other Heavy Construction Projects	64,459	
	Misc.-Rebar, Expanded Lath	5,206	172,196
LIGHT CONSTRUCTION	Non-Residential Buildings	34,407	
	Residential Buildings	9,877	
	Communication Systems: Hardware-Telephone, Pole, Vault	18,158	
	Material From Small Steel Centers	25,038	
	Misc.-Rebar, Expanded Lath	3,626	91,106
RECREATION	Sporting & Athletic Goods	4,972	4,972
TRANSPORTATION	Highway, Street and Airport Construction	117,270	
	Bridges (highway and rail)	16,780	
	Marine	6,067	
	Railroad & Rapid Transit	3,242	
	Automotive	1,374	
	Misc.-Rebar, Expanded Lath	1,392	146,125
OTHER (Not Reported Elsewhere By Market Category)	Containers	7,367	
	Fasteners	13,118	
	Forgings & Castings	10,037	
	Outdoor Advertising	773	
	Other	34,614	65,909
OTHER UNIDENTIFIED		70,160	70,160
	GRAND TOTAL	1,207,519	1,207,519

This study, a cooperative effort of the Zinc Institute Inc. and the American Hot Dip Galvanizers Association, analyzes the hot dip after fabrication galvanizing market by end-use industries. The statistics have been provided by 94 United States and Canadian galvanizers, with both captive and job operations included. This year showed a 5% decrease in respondents over the 1980 survey. AHDGA surveyed its 58 galvanizer members and received 35 replies. Zinc Institute Inc. surveyed the 282 non-AHGDA galvanizers and received 59 replies.

Shipments of hot dip after fabrication galvanized steel, as reported by these 94 galvanizers, amounted to 1,207,519 short tons in 1981. This 9% decrease from 1980 can be partly accounted for by the slight drop in respondents. According to estimates made by the U.S. Bureau of Mines, approximately 125,000 to 135,000 tons of slab zinc are consumed annually in hot dip galvanizing operations in the U.S. and Canada. It should be noted that the end-use survey results are given in tons of steel galvanized. Using a factor of 7% to 8% for the weight of the zinc coating, it can be determined that the 1,207,519 short tons of steel galvanized consumed between 85,000 and 97,000 short tons of slab zinc, accounting for 65% to 75% of the marketplace.

The following is a profile of galvanizers who completed this survey in 1980 and 1981 in terms of the size of their operations.

Tons of Steel Galvanized Per Year	Number of Galvanizers 1980	1981
1 to 5,000	42	43
5,000 to 10,000	19	18
10,000 to 20,000	21	13
20,000 to 30,000	5	4
30,000 and over	12	16
Total	99	94

The number of small galvanizers who process under 10,000 tons of steel annually has remained steady. The number of medium sized shops has decreased in favor of larger shops which galvanize over 30,000 tons of steel each year. This year 65 of the galvanizers who completed the survey also participated in the 1980 survey, that is 69%. Changes in responding galvanizers obviously affect the precision of the statistics returned each year. While this may make year to year comparisons of the actual numbers difficult, the accuracy of the trendline in end use industries is a reliable one with a 69% returning respondency.

As Table I indicates, electric utilities in 1981 again commands the largest share of the hot dip after fabrication galvanizing market, accounting for 324,702 short tons. Market share was 27% in 1981 compared to 21% in 1980. The largest portion of this market (82%) goes into electric transmission, transmission and generating equipment for generating plants, electric light

TABLE I
1979-1981 SHIPMENTS BY END-USE INDUSTRIES
(000 Short Tons)

	1979	1980	1981	1981%
Electric Utilities	276	289	325	27
Fabricated Wire Products	120	285	234	19
Heavy Construction	95	184	172	14
Transportation	184	154	146	12
Agriculture	141	95	99	8
Light Construction	105	225	91	7
Unidentified	169	62	70	6
Other Markets	46	76	66	6
Recreation	5	13	5	1
Total	1,141	1,383	1,208	100

and power plants, power transmission and distribution lines, substations and similar equipment. This market should remain a strong one. According to a survey on utility capital expenditures by *Electrical World* magazine, the electrical utility industry expects to spend over $40 billion on capital projects in 1982, an increase of 14% over the previous year. 70% of total utility spending is scheduled to go into generation equipment. After several essentially flat years of utility capital expenditures, this projection bodes well for the hot dip marketplace.

Fabricated wire products comprise the next largest hot dip after fab market at 233,788 short tons or 19%. The largest portion of this market goes into chain link fence and the associated gates, posts and fittings as well as wire cloth and fabric.

Heavy construction moved to third place displacing light construction at a 14% market share of 172,196 short tons. This market galvanizes components for petrochemical plants, paper and pulp mills, waste and waste treatment plants, heat exchangers, and other heavy construction projects. The U.S. Bureau of Industrial Economics estimates the value of 1981 new construction put in place at $270.3 billion, a 10% rise over 1980, taking inflation into account. This increase took place in a year of sluggish economic growth and high interest rates. If interest rates fall as projected, new construction projects will rise considerably, both for residential and nonresidential construction, making the long term outlook in this market very favorable.

The transportation market ranked fourth at 12% with 146,125 tons of steel galvanized in 1981. This market includes all components used to construct streets, highways, airport facilities, bridges, tunnels, ships, subways, railroads, automobiles, trucks and buses. Increased emphasis on corrosion resistance for transportation equipment has given this market a bright outlook. However, depressed conditions in the U.S. auto industry along with large cuts in federal funding for highway construction projects will keep the short term growth in this market limited.

Agricultural equipment comprised the fifth largest market at 8% or 98,561 short tons in 1981, remaining relatively stable with 1980 figures. The farm market has been plagued with low commodity prices and high interest rates for capital investment over the last few years. Little expansion is seen here until interest rates decline. This market consists of components used to construct agricultural equipment, implements and machinery such as irrigation equipment, barns, milking parlors, chicken brooders, conveyors, cleaning and sorting machines, tractors, incubators, mowers, windmills, silos, land rollers and levellers and water troughs.

Light construction represented 7% of the marketplace at 91,106 short tons dropping to sixth from third place at 16% and 225,000 tons in 1980. Light construction includes both commercial and residential building components for plants, warehouses, factories, hospitals, jails and public building as well as single family homes, condominiums, mobile homes, hotels, motels and dormitories. This category also includes communications systems and material from small steel centers. This market has also suffered from high interest rates. The U.S. housing market declined precipitously in 1981 with only one million housing starts, one half of 1978. Investors in light construction projects have postponed building, waiting for more favorable economic conditions. While the short term outlook will not improve until interest rates decline, a strong base of pent-up demand is being built in this market which projects a strong upsurge in light construction once recovery begins.

Unidentified markets comprised 7% of the total at 70,160 short tons. In order to obtain a more accurate perception of the total hot dip after fabrication galvanizing market, ZI requested galvanizers to report new tonnages even if they could not allocate into specific end-use categories.

6% of the market at 65,909 short tons goes to other markets which include containers, fasteners, forgings and castings and outdoor advertising. Other markets which galvanizers specified were hardware, pipe and tubing for unspecified uses.

Recreation remains the smallest market at less than 1% or 4,972 short tons. Recreation includes components used in sporting and athletic goods and equipment such as playground equipment, bleachers, stadiums, boat piers and trailers.

The end-use survey began in 1976 with the cooperation of the U.S. Bureau of Mines. While the number of respondents has varied, particularly in the earlier surveys precluding comparison of actual tonnages annually, the end-use market share percentages, detailed in Table II, identify trends in end usage to prevailing economic trends.

TABLE II
MARKET PERCENTAGE

	1976	1977	1978 (est.)	1979	1980	1981
Agriculture	12	7	8	12	7	8
Electric Utilities	22	19	24	24	21	27
Fabricated Wire Products	14	21	11	11	21	19
Heavy Construction	9	13	16	8	13	14
Light Construction	19	13	8	9	16	7
Recreation	1	6	1	1	1	1
Transportation	16	12	16	16	11	12
Other	7	9	16	19	10	12
Total	100	100	100	100	100	100

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